CLAIMS

1. A zoom lens comprising, in order from an object side to an image side, a first lens unit of positive refractive power, a second lens unit of negative refractive power, a third lens unit of positive refractive power and a fourth lens unit of positive refractive power, zooming from a wide-angle end to a telephoto end being effected by moving said second lens unit toward the image side, and shifting of an image plane due to zooming being compensated for by moving said fourth lens unit, wherein said second lens unit consists of four separate single lenses including three negative lenses and one positive lens, and said third lens unit has at least one positive lens both surfaces of which are aspherical.

2. A zoom lens according to claim 1, wherein said second lens unit consists of, in order from the object side to the image side, a negative first lens having a concave surface of larger curvature facing the image side than that of an opposite surface thereof, a bi-concave negative second lens, a positive third lens having a convex surface of larger curvature facing the object side than that of an opposite surface thereof and a bi-concave negative fourth lens.

3. A zoom lens according to claim 1, satisfying the

following condition:

$$0.24 < |f2/fA| < 0.33$$

where $fA = \sqrt{fw \cdot ft}$,

wherein f2 is a focal length of said second lens unit, and fw and ft are focal lengths in the wide-angle end and the telephoto end of said zoom lens, respectively.

4. A zoom lens according to claim 1, satisfying the following conditions:

$$36 < \nu n < 65$$

$$20 < \nu p < 35$$

where νn is a mean Abbe number of materials of negative lenses which constitute said second lens unit, and νp is a mean Abbe number of materials of positive lenses which constitute said second lens unit.

5. A zoom lens according to claim 1, satisfying the following condition:

$$1.70 < Nn < 1.95$$

where Nn is a mean refractive index of materials of negative lenses which constitute said second lens unit.

6. A zoom lens according to claim 1, satisfying the following condition:

$$0.82 < |R22/f2| < 1.07$$

where R22 is a radius of curvature of the second lens surface, when counted from the object side, in said second lens unit, and f2 is a focal length of said second

lens unit.

7. A zoom lens according to claim 1, satisfying the following condition:

$$1.66 < |R24/R25| < 4.00$$

where R24 and R25 are radii of curvature of the fourth and fifth lens surfaces, respectively, when counted from the object side, in said second lens unit.

8. A zoom lens according to claim 1, satisfying the following condition:

$$1.00 < |R26/R27| < 1.46$$

where R26 and R27 are radii of curvature of the sixth and seventh lens surfaces, respectively, when counted from the object side, in said second lens unit.

9. A zoom lens according to claim 1, wherein focusing is performed by moving said fourth lens unit.

10. A zoom lens according to claim 1, satisfying the following condition:

$$0.86 < |f3/fA| < 1.09$$

where $fA = \sqrt{fw \cdot ft}$,

wherein f3 is a focal length of said third lens unit, and fw and ft are focal lengths in the wide-angle end and the telephoto end of said zoom lens, respectively.

11. A zoom lens according to claim 1, satisfying

the following condition:

$$0.40 < \beta 4T < 0.55$$

where $\beta 4T$ is a magnification in the telephoto end of said fourth lens unit with an object at infinity.

12. A zoom lens comprising, in order from an object side to an image side, a first lens unit of positive refractive power, a second lens unit of negative refractive power, a third lens unit of positive refractive power and a fourth lens unit of positive refractive power, zooming from a wide-angle end to a telephoto end being effected by moving said second lens unit toward the image side, and shifting of an image plane due to zooming being compensated for by moving said fourth lens unit, wherein said second lens unit consists of four single lenses including three negative lenses and one positive lens, and at least one of said four single lenses is an aspherical lens.

13. A zoom lens according to claim 12, wherein said second lens unit consists of, in order from the object side to the image side, a negative first lens having a concave surface of larger curvature facing the image side than that of an opposite surface thereof, a bi-concave negative second lens, a positive third lens having a convex surface of larger curvature facing the object side than that of an opposite surface thereof and a bi-concave negative fourth lens.

14. A zoom lens according to claim 12, wherein said aspherical lens is said third lens.

15. A zoom lens according to claim 12, satisfying the following condition:

$$0.25 < |f2/fA| < 0.41$$

where $fA = \sqrt{fw \cdot ft}$,

wherein f2 is a focal length of said second lens unit, and fw and ft are focal lengths in the wide-angle end and the telephoto end of said zoom lens, respectively.

16. A zoom lens according to claim 12, satisfying the following conditions:

$$36 < \nu n < 65$$

$$20 < \nu p < 35$$

where νn is a mean Abbe number of materials of negative lenses which constitute said second lens unit, and νp is a mean Abbe number of materials of positive lenses which constitute said second lens unit.

17. A zoom lens according to claim 12, satisfying the following condition:

$$1.71 < Nn < 1.95$$

where Nn is a mean refractive index of materials of negative lenses which constitute said second lens unit.

18. A zoom lens according to claim 12, satisfying the following condition:

$$0.79 < |R22/f2| < 1.32$$

where R22 is a radius of curvature of the second lens surface, when counted from the object side, in said second lens unit, and f2 is a focal length of said second lens unit.

19. A zoom lens according to claim 12, satisfying the following condition:

$$1.28 < |R24/R25| < 3.20$$

where R24 and R25 are radii of curvature of the fourth and fifth lens surfaces, respectively, when counted from the object side, in said second lens unit.

20. A zoom lens according to claim 12, satisfying the following condition:

$$0.98 < |R26/R27| < 3.55$$

where R26 and R27 are radii of curvature of the sixth and seventh lens surfaces, respectively, when counted from the object side, in said second lens unit.

21. A zoom lens according to claim 12, wherein focusing is performed by moving said fourth lens unit.

22. An optical apparatus comprising a zoom lens according to one of claims 1 to 21.